UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/302,825	04/30/1999	RICHARD J. PEARSON	101069-0170	7476

24267   7590   07/13/2004

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EXAMINER
DAVIS, TEMICA M

ART UNIT	PAPER NUMBER
2681	

DATE MAILED: 07/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>08 April 2004</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3,4,6-20,22,24-29,31 and 33* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,4,6-20,22,24-29,31 and 33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Specification

1.   The amendment filed April 8, 2004 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: "Transmitting programmed response messages".

Applicant is required to cancel the new matter in the reply to this Office Action, or if the applicant believes the specification supports the added claim language, please direct the examiner to such passages in the specification.

However, for purposes of examination, the examiner will interpret "transmitting programmed response messages" as best understood, such as "canned messages" which are very well known in the art and are used to avoid the user having to manually transmit common messages used.

Response to Arguments

2.   Applicant's arguments with respect to the pending claims have been considered but are moot in view of the new ground(s) of rejection.   However, some arguments with respect to Hansson are addressed in the claim rejections below by giving more detailed explanations of the interpretation of the reference.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 1, 3, 4, 6, 8-10, 12, 20, 22, 24 –26, 28, 29 and 31 are rejected under 35

U.S.C. 103(a) as being unpatentable over Hansson, U.S. Patent No. 6,023,620 in view

of Roach, Jr., U.S. Patent No. 6,044,265 and further in view of Yamada, U.S. Patent No.

5,414,751.

Regarding claims 1, 20 and 29, Hansson discloses a method for programming

wireless subscriber terminals in a wireless system, the wireless system having a base

station in wireless communication with the wireless subscriber terminals using one or

more control channels and multiple traffic channels, and each wireless subscriber

terminal having a memory, a non-volatile memory, a processor, and a pre-existing

control program running on the processor to control operation of the wireless subscriber

terminal, the method comprising the steps of:

A.   transmitting from the base station over a communication channel to wireless

subscriber terminals information about a new control program (col. 2, lines 10-15, 41-45

and col. 3, lines 29-32);

B.   transmitting a response from individual wireless subscriber terminal over a

communication channel to the base station indicating whether that terminal will be a

recipient of the new control program (col. 2, lines 45-64);

C.   broadcasting the new control program in blocks of data from the base station to the recipient terminals over a communication channel (col. 2, line 64-col. 3, line 4);

D.   polling all of the recipient terminals by the base station over a communication channel to determine the transfer status of the new control program at each recipient terminal as evidenced by the fact that a plurality of mobile terminals can receive the program information (col. 3, lines 27-35) and as further evidenced by the fact that the update server, via the base station, transmits a checksum to each cellular telephone when transmitting the new program information (col. 3, lines 5-24);

E.   transmitting a status message from each recipient terminal to the base station over a point-to-point control channel (i.e., DCCH) indicating the status of the reception of the new control program (col. 4, lines 51-54);

F.   re-transmitting the program to each recipient terminal in response to the individual status messages sent from each recipient terminal that indicate an incomplete transmission occurred (col. 3, lines 5-24);

G.   transferring control of each recipient terminal to said new control program (col. 3, lines 18-20).

Hanson, however, fails to disclose wherein the base station transmits information about the new programs to the mobile stations using control channels.

In a similar field of endeavor, Roach, Jr. discloses methods and apparatus for cellular set programming. Roach further discloses wherein a base station broadcast programming information to a mobile telephone using control channels (col. 4, line 63-col. 5, line 11 and col. 9, line 13-col. 10, line 25).

At the time of invention, it would have been obvious to a person of ordinary skill in the art of modify Hansson with the teachings of Roach, Jr. to avoid user intervention when programming mobile terminals (Roach, Jr., col. 5, lines 6-7).

Hansson also fails to disclose re-transmitting select missing data blocks to each recipient terminal in response to the individual status messages sent from each recipient terminal that indicate an incomplete transmission and the specific data blocks needed.

In a similar field of endeavor, Yamada discloses a wireless apparatus responsive to control signals for mending or updating operational programming.

Yamada further discloses re-transmitting select missing blocks of data to mobile terminals as evidenced by the fact previously transmitted programming data in which errors have been detected (via parity check) can be retransmitted (col. 4, lines 33-46).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Hansson with the teachings of Yamada for the purpose of only retransmitting program portions which have been received in error. Such a feature would decrease the unnecessary use of system resources by eliminating the need to retransmit the entire programming information.

Hansson also fails to specifically disclose wherein each terminal transmits a response message to the base station indicating whether the terminal will be a recipient of the new control program. Hansson does teach that if a terminal does not want to participate, it simply ignores the message and if it does want to participate, it will send a positive response (col. 2, lines 45-55). The examiner contends, however, that at the

time of invention, it would have been obvious to a person of ordinary skill in the art to implement the feature of transmitting a negative response to the base station from the terminals not wanting to participate in receiving the new program, as such would remove the inherent delay caused in the system because of the base station waiting on a response from the terminals in which the program messages were sent.

With regard to the polling all of the terminals of the status of the new program, Hansson already makes provisions for determining the status of the program by the base station sending header information in the download message which contains the length of the file to be downloaded (col. 4, lines 11-15). Therefore, the examiner contends that polling for the status of the program would have been a design choice.

Regarding claim 3, the combination of Hansson, Roach, Jr. and Yamada discloses the method of claim 1, wherein the step of re-transmitting occurs over one or more point-to-point control channels (Hansson, col. 4, lines 34-54).

Regarding claim 6, the combination of Hansson, Roach, Jr. and Yamada discloses the method of claim 1 as described above. The combination, however, fails to disclose wherein the step of transferring control involves performing a series of diagnostic tests at each recipient wireless subscriber terminal to determine the validity of the new control program received at that wireless subscriber terminal.

The examiner contends that at the time of invention, such a feature would have been obvious to a person of ordinary skill in the art as such feature would ensure that the program is acceptable for the terminal to use.

Regarding claim 8, the combination of Hansson, Roach, Jr. and Yamada

discloses the method of claim 1 further comprising the step of storing the original control

program in a non-volatile memory after transferring control of the processor to the new

control program as evidenced by the fact the mobile can toggle between memories

(Hansson, col. 3, lines 13-21).

Regarding claim 9, the combination of Hansson, Roach, Jr. and Yamada

discloses the method of claim 1 wherein the pre-existing control program and the new

control program each comprise a software patch for controlling less than all of the

operations of the wireless subscriber terminal (Hansson, col. 3, lines 13-21).

Regarding claim 10, the combination of Hansson, Roach, Jr. and Yamada

discloses the method of claim 1 wherein the wireless subscriber terminal is a cellular

phone (Hansson, figure 1).

Regarding claim 12, the combination of Hansson, Roach, Jr. and Yamada

discloses the method of claim 1 as described above. The combination, however, fails to

disclose wherein the step of transferring control to the new control program is forced by

the base station during the step of initializing each wireless subscriber terminal.

The examiner contends, that such a technique is well known in the art.

Therefore, at the time of invention, it would have been obvious to a person of ordinary

skill in the art to modify the combination of Hansson and Yamada with the teachings of

well known prior art as such forcing would ensure the mobile terminal will use the new

programming information such as at a subsequent powering on of the phone. This will

ensure that the mobile phone is being used at an optimum level.

Regarding claim 24, Hansson discloses a wireless subscriber terminal for use in

a wireless system, the terminal comprising: a memory (130/150; figure 1); a transmitter

(140; figure 1) for transmitting reverse messages from the terminal over an air interface

including one or more status messages over a point-to-point control channel including

transmitting a response to a base station indicating whether the terminal will be a

recipient of the new control program and messages indicating the status of the

reception of a new control program, or portion thereof including information relating to

missing data blocks from a program transfer (col. 3, line 5-col. 4, line 54); a receiver

(140; figure 1) for receiving forward messages from a base station over a

communication channel (col. 4, lines 11-15), a processor (140; figure 1) connected to

the memory, the transmitter, and the receiver for controlling the terminal, and for storing

the one or more program segments in the memory.

Hanson, however, fails to disclose wherein the base station transmits information

about the new programs to the mobile stations using control channels.

Roach, Jr. discloses wherein a base station broadcast programming information

to a mobile telephone using control channels (col. 4, line 63-col. 5, line 11 and col. 9,

line 13-col. 10, line 25).

At the time of invention, it would have been obvious to a person of ordinary skill

in the art of modify Hansson with the teachings of Roach, Jr. to avoid user intervention

when programming mobile terminals (Roach, Jr., col. 5, lines 6-7).

Hansson also fails to disclose wherein the program segments are sent without

regard to sequence. Yamada discloses transmitting program segments selectively

without regard to sequence as evidenced by the fact previously transmitted

programming data in which errors have been detected (via parity check) can be

retransmitted (col. 4, lines 33-46).

At the time of invention, it would have been obvious to a person of ordinary skill

in the art to modify Hansson with the teachings of Yamada for the purpose of only

retransmitting program portions which have been received in error. Such a feature

would decrease the unnecessary use of system resources by eliminating the need to

retransmit the entire programming information.

With regard to the polling the terminals of the status of the new program,

Hansson already makes provisions for determining the status of the program by the

base station sending header information in the download message which contains the

length of the file to be downloaded (col. 4, lines 11-15). Therefore, the examiner

contends that polling for the status of the program would have been a design choice.

Regarding claims 4, 22, 25, 26, 28 and 31 the combination of Hansson, Roach,

Jr. and Yamada discloses the method/apparatus of claims 1, 20, 24 and 29 as

described above and further discloses transmitting/retransmitting over broadcast control

channels (Roach, Jr., col. 4, line 63-col. 5, line10).

5.   Claims 7, 27 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Hansson, Roach, Jr., Yamada and Halonen, U.S. Patent No. 5,887,254.

Regarding claim 7, the combination of Hansson, Roach, Jr. and Yamada

discloses the method of claim 1 as described above. The combination, however, fails to

disclose wherein the step of storing each program segment received by the recipient wireless subscriber terminal in the non volatile memory of the wireless subscriber terminal, whereby the wireless subscriber terminal retains all received program segments if reception of program segments by the wireless subscriber terminal is interrupted.

Halonen reads on this limitation (col. 6, lines 2-10). At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify the combination of Hansson, Roach, Jr. and Yamada with the teachings of Halonen for the purpose of saving system resources by only transmitting portions of the program not previously received before the interruption.

Regarding claim 27 and 33 the combination of Hansson, Roach, Jr. and Yamada discloses the method/terminal of claims 24 and 29 as described above. The combination, however, fails to disclose forward switch-over messages.

Halonen reads on this limitation (col. 3, line 61-col. 4, line 54). At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify the combination of Hansson, Roach, Jr. and Yamada with the teachings of Halonen for the purpose of ensuring the mobile terminal will use the new programming information. This will ensure that the mobile phone is being used at an optimum level.

6.   Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hansson, Roach, Jr., Yamada and Lahdemaki, U.S. Patent No. 6,167,257.

Regarding claim 11, the combination of Hansson, Roach, Jr. and Yamada

discloses the method of claim 1 as described above. The combination, however, fails to

disclose wherein the wireless subscriber terminal is a terminal of a wireless local loop.

In a similar field of endeavor, Lahdemaki discloses a method of remotely

changing the communication settings of a subscriber station.

Lahdemaki further discloses a terminal of a wireless local loop which can be

programmed via a base station (col. 3, line 45-col. 4, line 42; figures 1-3).

At the time of invention, it would have been obvious to a person of ordinary skill

in the art to modify the terminals of Hansson, Roach, Jr. and Yamada with the terminals

of Lahdemaki since it is well known in the art that such WLL terminals can be

programmed via over the air programming.

7.   Claims 13, 14 and 16-18 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Hansson, Roach, Jr., Yamada and Zicker, U.S. Patent No.

5,794,141.

Regarding claims 13 and 16 Hansson discloses a base station (120) inherently

having a processor, transmitter and receiver; a control program transmitted from the

base station (col. 2, lines 41-45); one or more wireless subscriber terminals in wireless

communication with the base station over an air interface (figure 1), the air interface

comprising inherently a plurality of channels (col. 4, lines 50-54); means for transmitting

from the base station to wireless subscriber terminals information about a new control

program (col. 2, lines 41-45), means for transmitting a response from terminals over a

communication channel to the base station indicating whether that terminal will be a

recipient of the new control program (col. 2, lines 45-64), means for broadcasting the

new control program in blocks of data from the base station to the recipient terminals

(col. 2, lines 56-64); means for determining the transfer status of the new control

program at each recipient terminal (col. 3, lines 5-24); means for transmitting a status

message from each recipient terminal to the base station over a control channel

(DCCH) indicating the status of the reception of the new control program (col. 3, lines 5-

24, col. 4, lines 48-54); means for re-transmitting the program to each recipient terminal

in response to the individual status messages sent from each recipient terminal that

indicate an incomplete transmission occurred (col. 3, lines 5-24); means transferring

control of each recipient terminal to said new control program (col. 3, lines 18-20).

Hanson, however, fails to disclose wherein the base station transmits information

about the new programs to the mobile stations using control channels.

Roach further discloses wherein a base station broadcast programming

information to a mobile telephone using control channels (col. 4, line 63-col. 5, line 11

and col. 9, line 13-col. 10, line 25).

At the time of invention, it would have been obvious to a person of ordinary skill

in the art of modify Hansson with the teachings of Roach, Jr. to avoid user intervention

when programming mobile terminals (Roach, Jr., col. 5, lines 6-7).

Hansson also fails to disclose re-transmitting select missing data blocks to each

recipient terminal in response to the individual status messages sent from each

recipient terminal that indicate an incomplete transmission and the specific data blocks needed.

In a similar field of endeavor, Yamada discloses a wireless apparatus responsive to control signals for mending or updating operational programming.

Yamada further discloses re-transmitting select missing blocks of data to mobile terminals as evidenced by the fact previously transmitted programming data in which errors have been detected (via parity check) can be retransmitted (col. 4, lines 33-46).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Hansson with the teachings of Yamada for the purpose of only retransmitting program portions which have been received in error. Such a feature would decrease the unnecessary use of system resources by eliminating the need to retransmit the entire programming information.

Hansson also fails to specifically disclose wherein each terminal transmits a response message to the base station indicating whether the terminal will be a recipient of the new control program. Hansson does teach that if a terminal does not want to participate, it simply ignores the message and if it does want to participate, it will send a positive response (col. 2, lines 45-55).   The examiner contends, however, that at the time of invention, it would have been obvious to a person of ordinary skill in the art to implement the feature of transmitting a negative response to the base station from the terminals not wanting to participate in receiving the new program, as such would remove the inherent delay caused in the system because of the base station waiting on a response from the terminals in which the program messages were sent.

With regard to the polling all of the terminals of the status of the new program, Hansson already makes provisions for determining the status of the program by the base station sending header information in the download message which contains the length of the file to be downloaded (col. 4, lines 11-15). Therefore, the examiner contends that polling for the status of the program would have been a design choice.

Hansson also fails to specifically the base station capable of storing programming information, but rather shows the base station first receiving programming information from a server processor (100) and then transmitting that programming information to remote terminals (page 8, lines 2-6).

Zicker discloses a base station that stores programming information, and then transmits that programming information to a mobile device (col. 7, line 38-col. 8, line 43 and col. 12, lines 47-54).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify the combination of Hansson and Yamada with the teachings of Zicker, since it is well known in the art that base stations are capable of storing information, specifically programming information.

Regarding claim 14, the combination of Hansson, Roach, Jr., Yamada and Zicker discloses the system of claim 13, wherein the one or more wireless subscriber terminals comprise cellular phone handsets (Hansson; figure 1).

Regarding claims 17 and 18, the combination of Hansson, Roach, Jr., Yamada and Zicker discloses the base station of claim 16 as described above and further

discloses transmitting/retransmitting over broadcast control channels (Roach, Jr., col. 4, line 63-col. 5, line 10).

8.   Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hansson, Roach, Jr., Yamada, Zicker and Lahdemaki.

Regarding claim 15, the combination of Hansson, Roach, Jr., Yamada and Zicker discloses the system of claim 13 as described above. The combination, however, fails to disclose wherein the wireless subscriber terminal is a terminal of a wireless local loop.

Lahdemaki discloses a terminal of a wireless local loop which can be programmed via a base station (col. 3, line 45-col. 4, line 42; figures 1-3).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify the terminals of Hansson, Roach, Jr., Yamada and Zicker with the terminals of Lahdemaki since it is well known in the art that such WLL terminals can be programmed via over the air programming.

9.   Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hansson, Roach, Jr., Yamada, Zicker and Halonen.

Regarding claim 19, the combination of Hansson, Yamada and Zicker discloses the base station of claim 16 as described above. The combination, however, fails to disclose forward switch-over messages.

Halonen reads on this limitation (col. 3, line 61-col. 4, line 54). At the time of

invention, it would have been obvious to a person of ordinary skill in the art to modify

the combination of Hansson, Roach, Jr., Yamada and Zicker with the teachings of

Halonen for the purpose of ensuring the mobile terminal will use the new programming

information. This will ensure that the mobile phone is being used at an optimum level.

Conclusion

10.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Temica M. Davis whose telephone number is (703) 306-

5837. The examiner can normally be reached Monday-Friday (alternate Fridays) from

9:00am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Erika Gary can be reached on (703) 308-0123. The fax phone number for

the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Temica M. Davis
Examiner
Art Unit 2681

July 7, 2004

TEMICA M. DAVIS
PATENT EXAMINER